

REMARKS

In the Office Action dated August 13, 2004, the specification was objected to as allegedly failing to provide proper antecedent basis for the claimed subject matter. The Office Action states that the limitation of "when a signal difference between said previously processed pixel and said current pixel is greater than a predefined threshold" of claims 1, 9 and 17 is not included in the detailed description and the drawings. In response, Applicant has amended claims 1, 9 and 17 removing this limitation. The Office Action also states that the limitation of "said conversion signal based on said low signal" of claim 7 and 15 is not included in the detailed description and the drawings. In response, Applicant has amended claims 7 and 15 removing this limitation. The Office Action further states that the limitation of "wherein said digital-to-analog converter is a ten bit analog-to-digital converter" of claims 12 and 14 is not included in the detailed description and the drawings. In response, Applicant has amended claims 12 and 14 changing the limitation of "ten bit analog-to-digital converter" to the limitation of "ten bit digital-to-analog converter".

In the Office Action, the disclosure was also objected to because 7-bit flash ADC is allegedly not disclosed in the drawings. However, Fig. 1 discloses two 7 bit flash ADCs 122A and 122B, and thus, Applicant requests that this objection to the disclosure be withdrawn.

The Office Action has also rejected claims 1-21 under U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 4,573,035 ("Dolazza"), or over Dolazza in view of U.S. Patent No. 6,587,144 ("Kim") or U.S. Patent No. 6,654,054 ("Embler"). In response, Applicant respectfully asserts that the amended independent claims 1, 9 and 17 are neither anticipated nor obvious in view of the cited references, as explained in the following remarks. In view of the amendments to the claims and the following remarks, Applicant respectfully requests the allowance of the pending claims 1-21.

A. Patentability of Amended Independent Claims 1, 9 and 17

The Office Action has rejected the independent claims 1, 9 and 17 under U.S.C. §103(a) as allegedly being unpatentable over Dolazza. The amended independent claim 1 recites:

“A method of correcting erroneous image signals comprising:
providing a high signal and a low signal based on an image signal of a previously processed pixel, said high signal and said low signal defining a signal range about said image signal of said previously processed pixel; and
digitizing an analog signal of a current pixel using said high and low signals as references to derive a digitized signal of said current pixel within said signal range, including limiting said analog signal of said current pixel by said high and low signals” (emphasis added).

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP §2131. In addition, to establish a *prima facie* case of obviousness, “the prior art reference (or references when combined) must teach or suggest all of the claim limitations.” MPEP 2143.

The cited reference of Dolazza does not disclose the element of “providing a high signal and a low signal based on an image signal of a previously processed pixel” (emphasis added), as recited in the amended claim 1. Dolazza does disclose providing an upper analog signal (+Ref) and a lower analog signal (-Ref), as illustrated in Fig. 7 and described in column 10, lines 8-30. The upper and lower analog signals are derived from an analog signal V, which is received by the sample and hold (S/H) 280 to provide a stabilized sample of V over the conversion period for each converted sample. The stabilized sample signal from the S/H 280 is received by the linear analog-to-digital converters 282 and 290, providing a first digital word and a second digital word. The first digital word is used to produce the upper analog signal (+Ref) and the lower analog signal (-Ref) by the programmable read only memory look-up table (PROM) 284, and the digital-to-analog converters (DACs) 286 and 288. The upper analog signal and the lower analog signal are received by the A/DC 290 as external upper and lower reference signals, respectively, which permit

the A/DC to convert the analog signal ("the stabilized sample signal") from the S/H 280 to a digital output signal ("the second digital word").

The Office Action alleges that the upper analog signal (+Ref) and the lower analog signal (-Ref) disclosed in Dolazza is "based on an image signal of a previously processed pixel," as recited in the amended claim 1, by citing the output of element 282 ("A/DC 282") in Fig. 7. Furthermore, the Office Action alleges that Dolazza discloses "digitizing an analog signal of a current pixel using said high and low signals as references to derive a digitized signal of said current pixel," as recited in the amended claim 1, by citing the output of block 280 ("A/DC 280").

As disclosed in Dolazza, the +Ref and -Ref signals are derived from the stabilized sample signal from the A/DC 280 via the A/DC 282, the PROM 284, the DAC 286 and the DAC 288. The stabilized sample signal from the A/DC 280 is also used to derive a digital signal by the A/DC 290, which uses the +Ref and -Ref signals as references. Thus, the same stabilized sample signal from the A/DC 280 is used to produce the +Ref and -Ref signals and to digitize an analog signal, i.e., the stabilized sample signal, to derive a digitized signal. Consequently, the +Ref and -Ref signals CANNOT be based on an image signal of a previously processed pixel, while the digitized signal is derived from analog signal of a current pixel. Therefore, Dolazza does not describe, teach or suggest the element of "providing a high signal and a low signal based on an image signal of a previously processed pixel", as recited in the amended claim 1. As such, Applicant respectfully asserts that the amended independent claim 1 is neither anticipated by nor obvious over Dolazza, and should be allowed.

The above remarks are also applicable to the amended independent claims 9 and 17, which include similar limitations. The amended claim 9 recites in part, "means for outputting a high signal and a low signal based on a signal of a previously processed pixel," while the amended claim 17 recites in part, "a digital-to-analog converter that outputs a high signal and a low signal based on a digital image signal of a previously processed photosensitive pixel." Since Dolazza does not disclose "providing a high signal and a low signal based on an image signal of a previously processed pixel", Dolazza also does not disclose the outputting means of the amended

claim 9 or the digital-to-analog converter of the amended claim 17. As such, Applicant respectfully asserts that the amended independent claims 9 and 17 are neither anticipated by nor obvious over Dolazza, and should be allowed.

B. Patentability of Dependent Claim 2-8, 10-16 and 18-21

Each of the dependent claims 2-8, 10-16 and 18-21 depends on one of the independent claims 1, 9 and 17. As such, these dependent claims include all the limitations of their respective base claims. Therefore, Applicant submits that these dependent claims are allowable for at least the same reasons as their respective base claims.

Applicant respectfully requests reconsideration of the claims in view of the claim amendments and the remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted,
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